

REMARKS

Claim and Specification Objections

In the pending office action, the Examiner requested that Applicant correct any specification errors. In response, Applicant amends several specification paragraphs to include the appropriate reference numbers and to correct grammatical errors. No new matter is added.

The pending office action also included several claim objections. First, the Examiner objected to claims 13, 21, 23, 27, 30, 39, and 40 for not spelling out the acronym the first time it appears in a claim set. Second, the Examiner notes that claim 44 includes the phrase “sends the sends the.” In response, Applicant amends these claims to delete the additional “sends the” in claim 44 and to spell out each acronym in claims 13, 21, 23, 27, 30, 39, and 40. No new matter is added.

In addition, Applicant amended claims 9, 13 – 15, 17, 19, 22, 24, 25, 27, 28, 31, 32, and 41 – 43 to uniformly recite multicast flow identifiers, instead of simply reciting identifiers or flow identifiers. These amendments do not add any new matter or change the scope of the claims.

In light of the enclosed amendments and above remarks, Applicant requests that the Examiner reconsider the objections.

§112 Rejections

The Examiner rejected claim 1 under §112 for failing to particularly point out and distinctly claim the invention. In particular, the Examiner asserts that claim 1 does not clearly state what features of the MCFTP statement are being used to manage the multicast session because the MCFTP statement is “merely a packet with a predetermined format and fields.” To further clarify the claimed invention, Applicant amends claim 1 as shown in the attached claim amendments. As amended, claim 1 explicitly claims that the MCFTP statement provides a reduced multicast flow identifier to a mobile station to manage a multicast session. Support for

this amendment may be found in at least Figure 2 and paragraphs [0018] – [0020]. Claims 2 and 8 were also amended to conform the dependent claims language to that of the independent claim. No new matter is added.

The Examiner also notes that claim 13 recites “an MS” in both sending steps, rendering claim 13 unclear. In response, Applicant amends claim 13 to make it clear that claim 13 claims sending the mapping and the second multicast flow identifier to the same mobile station. No new matter is added.

Lastly, the Examiner asserts that claims 13 – 15, 24, 25, 31, and 32 lack antecedent basis for “the multicast flow,” claims 7, 16, and 26 lack antecedent basis for “the multicast service,” and claim 27 lacks antecedent basis for “the inter-relationship.” In response, Applicant replaces “the multicast flow” with “the selected multicast session information flow” in each of claims 13 – 15, 24, 25, 31, and 32. Antecedent support may be found in amended claim 11 (for 13 – 15), amended claim 21 (for 24 – 25), and amended claim 27 (for claims 31 – 32).

Applicant also replaces “the multicast service” with “the multicast session” in claims 7, 16, and 26. Antecedent support may be found in the preamble of claims 1, 9, and 18, respectively.

Lastly, Applicant replaces “the inter-relationship” in line 6 of claim 27 with “an inter-relationship.”

In light of the enclosed amendments and above remarks, Applicant requests that the Examiner reconsider the §112 rejections.

§102 Rejections – Independent Claims

The Examiner asserts that Jorgensen (U.S. Patent No. 6,862,622) anticipates independent claims 9 and 18 under 35 U.S.C. §102(e). Claim 9 claims:

9. A method for managing a multicast session in a communication system, comprising the steps of:

generating a first multicast flow identifier that is used to select one of many available multicast session information flows;

generating a second multicast flow identifier, smaller than the first multicast flow identifier, that is used to select one of many available multicast session information flows; and

establishing an inter-relationship between the first multicast flow identifier and the second flow identifier.

In support of this rejection, the Examiner asserts that column 18, lines 19 – 39, column 39, lines 57 – 65, column 62, lines 2 – 25, and column 75, lines 37 – 47 teach each and every element of claim 9. However, as discussed in detail below, nothing in any of these cited sections has anything to do with multicast flow identifiers, much less generating and inter-relating two different sized multi-cast flow identifiers as required by independent claim 9.

First, the Examiner asserts that column 39, lines 57 – 65 of Jorgensen clearly reads on generating the first and second multicast flow identifiers claimed in the first two steps of claim 9. However, the cited section simply lists, in broad terms, different ways that Jorgensen's invention supports multicast operations for a wireless base station. Nothing in the cited section even mentions multicast identifiers. As such, the cited section does not anticipate the two generating steps of claim 9.

The Examiner also asserts that column 75, lines 37 – 47 clearly "reads on the second flow identifier being smaller in size than the first flow identifier," as required by the second generating step of claim 9. However, as conceded by the Examiner, the cited section describes how a TCP transmitter transmits a TCP sliding window of data packets and alters the size of the window during time of congestion. Clearly, this section describes varying the size of data packets being transmitted by a source TCP to a wireless base station, which is wholly different from generating different sized multicast flow identifiers.

Further, the Examiner asserts that column 62, lines 2 – 25 also describe generating a second multicast flow identifier that is smaller than a first multicast flow identifier. As conceded by the Examiner, the cited section recites that an IP data flow may be classified into QoS

requirements and priority classes. The Examiner then asserts that because the priority of one IP data flow may be lower (or smaller) than the priority of another IP data flow, then the cited section teaches the different sized flow identifiers of claim 9. However, assigning different priorities to data blocks has nothing to do with generating different sized multicast flow identifiers. As such, the cited section is unrelated to any of the limitations in claim 9.

Lastly, the Examiner asserts that column 18, lines 19 – 39 describes establishing an inter-relationship between the first and second multi-cast flow identifiers, as required by claim 9. However, the cited section simply describes that data traffic may be classified into different classes of service based on information contained in the packet headers. This section never mentions multicast flow identifiers, much less establishing an inter-relationship between different sized multicast flow identifiers.

For at least the reasons discussed above, nothing in the cited sections from Jorgensen have anything to do with the limitations of independent claim 9. As such, Jorgensen does not anticipate independent claim 9. Further, independent claim 18 claims a router that generates first and second multicast flow identifiers, where the second identifier is smaller than the first. Therefore, for substantially the same reasons applied above for claim 9, the cited sections from Jorgensen are also unrelated to independent claim 18. As such, Jorgensen also does not anticipate independent claim 18. Applicant respectfully requests reconsideration.

§103 Rejection – Independent Claim 38

In the pending office action, the Examiner rejected independent claim 38 under §102 for lacking novelty in view of Yang (U.S. Patent No. 5,917,819). However, as shown in the attached claim amendments, Applicant amended claim 38 to include the limitations of original claim 39. As such, the §102 rejection is moot. Because the Examiner rejected original claim 39

under §103 as obvious in view of Yang and Jorgensen, the following addresses the rejection as it may apply to amended independent claim 38.

In the pending office action, the Examiner asserts that it would be obvious to combine the wireless point-to-multipoint teachings of Jorgensen with the multicast ATM (Asynchronous Transfer Mode) system of Yang because the combination “provides the desirable added feature of wireless and mobility to the multicast transmission system of Yang et al.” As discussed below, this motivation is fundamentally flawed and cannot be maintained.

A prima facie case of obviousness requires a suggestion or motivation for the combination, either in the cited art or in the knowledge generally available to one of ordinary skill in the art. In this case, the Examiner simply asserts it would be obvious to convert the multicast ATM system taught by Yang into a wireless multicast system using the teachings of Jorgensen. Applicant strongly disagrees. An ATM system uses ATM switches to transfer data from an input port to one or more desired output ports. As understood by those skilled in the art, ATM switches comprise wired network hub switches controlled by the well-established ATM protocol. It does not make sense to break apart such switches to turn them into wireless components. As such, it is not obvious to apply the wireless teachings of Jorgensen to the ATM switch of Yang.

Further, if Jorgensen is combined with Yang, it is unclear what the result of this combination would be. How would the wireless components of Jorgensen be incorporated into the wired switch of Yang? How does the resulting combination implement a wireless multicast system? Because the result of any combination is unclear, the combination itself cannot be obvious.

In addition, if a proposed modification renders the prior art unsatisfactory for its intended purpose, or if the proposed modification changes the principle of operation of the prior art, then the combination cannot be deemed obvious (see MPEP 2143.01). In this case, the Examiner is proposing that the ATM system of Yang be modified according to the teachings of Jorgenson.

However, Yang clearly describes the multicast ATM system in terms of a wired ATM switch. As such, modifying the wired ATM switch of Yang to some kind of wireless multicast system switch changes the principle of operation of the ATM switch and renders the ATM switch unsatisfactory for its intended purpose, i.e., mapping ATM cells. In fact, the proposed modification eliminates the wired ATM switch all together.

For at least these reasons, nothing in Jorgensen, Yang, or the general knowledge available to those skilled in the art provides the requisite motivation for combining Jorgensen with Yang. As such, amended independent claim 38 is patentably distinct over Yang and/or Jorgensen. Applicant respectfully requests reconsideration.

§103 Rejections – Independent Claim 1

The Examiner rejected independent claim 1 under §103 as obvious in view of Baum (U.S. Patent No. 6,850,495). Generally, this rejection ties to the §112 rejection discussed above. Because the Examiner believed that claim 1 did not clearly indicate the specific features of the MCFTP statement used to manage the multicast session information flow, the Examiner asserted that any standard multi-channel protocol, such as the one taught by Baum, reads on claim 1. As discussed above, Applicant amended independent claim 1 to specifically claim that the MCFTP statement manages the multicast flow by providing a reduced multicast flow identifier to a mobile station. Because nothing in Baum teaches or suggests generating the reduced multicast flow identifier or providing the reduced multicast flow identifier to a mobile station using a MCFTP, nothing in Baum teaches or suggests the limitations of amended claim 1. Applicant requests reconsideration.

Summary

Applicant notes that the pending office action indicates that claims 27 – 37 are allowable once the §112 rejections are addressed. Further, because independent claims 1, 9, 18, and 38 are new and non-obvious over the cited art, as discussed above, dependent claims 2 – 8, 10 – 18, and 40 – 44 are necessarily patentably distinct. As such, Applicant submits that claims 1 – 38 and 40 – 44 are allowable over the cited art. Applicant respectfully requests reconsideration and allowance of the claims.

Respectfully submitted,

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